

BEHREND BEACON YEAR IN REVIEW

A look back at the stories that define the 2009-2010 academic year at Penn State Behrend

(ALL STORIES PRINTED WITH AUTHOR, THEIR STAFF TITLE AT THE TIME AT WHICH THE ARTICLE WAS PUBLISHED, AND DATE THE ARTICLE ORIGINALLY RAN IN THE BEHREND BEACON.)

School Director Knacke to retire

RYAN GULA
science editor
April 9, 2010

Dr. Roger Knacke, the head of the School of Science at Penn State Behrend, is set to retire from the director post at the end of the school year, a position he has held for 18 years.



Penn State Behrend
School of
Science Director
Roger Knacke.

Knacke came to Behrend after teaching at the State University of New York (SUNY) in Stony Brook where he also headed the science department for six years.

Knacke is a graduate of The University of California Berkeley where he received a bachelor's and Ph.D. in physics.

He became interested in astrophysics when he was in graduate school and decided to teach and perform research in that field. In an interview, he joked, "I'll retire from administration, not teaching."

After retirement he will be moving to California, where he hopes to return to the classroom as a professor, an aspect of education that he has missed.

Looking back at his experience at Behrend, he remembers working with outstanding students and faculty, and enjoyed following the paths that students chose once they left Behrend. Some went onto larger universities for

graduate studies while others entered the industry to lead major companies.

During his tenure at Behrend, he was pleased to be a part of the administration that brought more research to the college, effectively creating what he considers to be "an ideal university," where there is an equal emphasis on both teaching and new knowledge.

He was careful not to take complete responsibility for accomplishing this, being quick to point out that there were many who helped achieve this goal and that there is still more to be done.

He hopes that this atmosphere of students "doing and learning" science will continue for many years to come.

He says that he will miss the people at Behrend the most when he leaves. He recalled some of his favorite mem-

ories each year, watching as new students arrived each fall after high school and how quickly they assumed the roles of young adults and became more competent individuals.

He will speak about 'Dark Energy in the Universe' on April 15 in one of the college's last Open House Nights in Astronomy this year.

Knacke started this Behrend tradition in the fall of 1993, a program that has allowed both students and community members to learn more about their surrounding world and given thousands their first glimpse of the sky through a telescope.

As Knacke and the school prepares for his departure, they continue their search for a new director of science. If a director is not found, an interim director will be named for next year, and another search will be performed.



Halloween Chemistry

MARIE EBNER
chemistry writer
October 30, 2009

Cue the maniacal laughter and werewolf howling, Halloween is readily approaching, and it's time to bust a few ways chemistry can help make your Halloween the creepiest yet!

Now, everyone has heard of fog machines, but do you know how they work? Typically the kinds you can buy in a store contain a bottle filled with a mixture of glycerin or glycol and water which is then pumped through an exchanger heated up to 400°C. When this water mixture hits the exchanger it turns to steam, and then is forced out of the machine into a much cooler environment. This causes the steam to condense and you get a fog which rises in the air.

Another interesting eerie effect can only be seen with the help of a black light. Several chemical compounds glow when put under a black light, such as zinc sulfide and strontium aluminate, however those would be hard to get your hands on for a Halloween party. Some more common and less illegal household chemicals contain phosphorescents, which glow under a black light, such as bleach and tooth whitener. Both contain these phosphorescents to uphold their advertisement of trying to make things whiter than white. Craft stores also sell paints containing phosphorescents which will either glow in the dark or glow with the help of a black light.

Carving a pumpkin and then painting it with glow in the dark paint can be a creepy alternative to the traditional candle. Any dye from a highlighter will be fluorescent under a black light as well as most bodily fluids. On that note, please refrain from having a black light in the bathroom!

Now go buy some dry ice, paint a pumpkin with glow in the dark paint, put on a chilling rendition Frankenstein for that party of yours and see just how creepy chemistry can be.

Chemistry Week brings events to Behrend

MARIE EBNER
chemistry writer
October 16, 2009

National Chemistry Week is upon us again! This year's events and activities, scheduled from Oct 18-24, are based upon the theme "Chemistry- It's Elemental." The activities will highlight the elements as we use them in our daily lives as well as celebrate the 140th anniversary of the creation of the periodic table of the elements by Dmitri Mendeleev.

The elements, as many have learned in their general chemistry classes, not only make up all of the chemical components that we come in contact with but make up ourselves. We also come in contact with individual elements in our daily lives. They can be seen everywhere: from the graphite made of carbon sheets that you use to take all of your wonderful chemistry notes, to the millions of pennies made of copper that you pay for your lovely chemistry class each semester, to the aluminum cans full of energy drink that help you get through it all.

These National Chemistry Week events are sponsored by the American

Chemical Society and are organized and designed by the Committee on Community Activities. The program chair for National Chemistry Week at the national as well as local level is Tracy A. Halmi, a senior lecturer here at Penn State Behrend. Halmi has been the national program chair for a total of three years, and the local chair for a total of ten years.

The committee not only organizes the events but creates annual themes for national chemistry week such as the "Chemistry-It's Elemental" theme this year and previous themes such as "Having a Ball with Chemistry" and "The Joys of Toys."

The local chapter of the American Chemical Society will be sponsoring three events within our community. These events are made possible by the local section of ACS as well as volunteering students and faculty from not only Penn State Behrend, but also Allegheny College, Edinboro University, Gannon University, Mercyhurst College, and University of Pittsburgh at Titusville.

All of the activities will be "kid-friendly" element based activities such as showing that by touching a penny, you are actually touching an element, and there will be free museum admission during the event hours courtesy of the John Nesbit Rees and Sarah Henne Rees Charitable Foundation. Available at each of the events is a free hands on activity newspaper which revolves around the theme of the year, elements. It includes puzzles for kids, at home experiments, and an article on the Elemento Chemistry Card Game for kids.

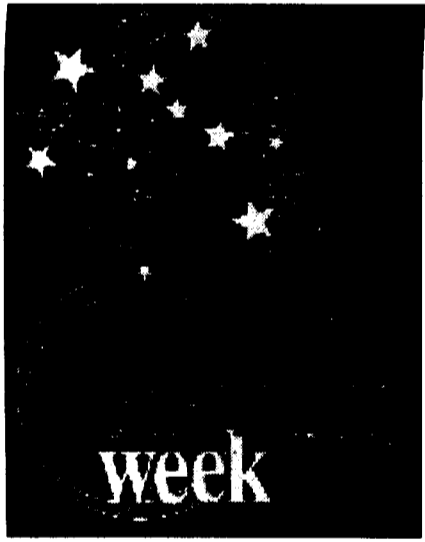
The really dangerous, fire-ball making, you-should-not-try-this-at-home experiments will be shown during the Behrend-Exclusive Demo Show put on by the Chemistry Club on Wednesday, October 21 in 101 OBS at 7 p.m. Chemistry Club will also be sponsor-



Tracy Halmi, a senior lecturer in chemistry at Penn State Behrend, put on a presentation at the Blasco Library during National Chemistry Week in 2008.

ing the painting of the glass windows of Otto Behrend Science (OBS) Building for National Chemistry Week with the names of the elements, as they do every year. Given this year's theme, though, the event carries its own spe-

cial significance. Elements impact our daily lives by making it possible; make sure to stop by one of the National Chemistry Week events to learn just how important they are to you.



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Anatomy of a BLACK HOLE

RYAN GULA
science editor
March 19, 2010

Something no one can look inside, and which no one can figure out except through advanced mathematics.

Black holes. Perhaps a topic which may not draw crowds at a college campus, but on Thursday, Darren Williams spoke to a standing room only OBS 101 in his event, "What's in a Black Hole? Better Ask Hawking."

Every seat in the lecture hall was occupied, and audience members lined the aisles and watched on a TV in the lobby as Williams explained the basics of black holes.

"A black hole is a dead star compressed to ultra-high density," he said. "No one can see inside a black hole, but we can use mathematics to study what's there."

The curious crowd varied from third graders, to students seeking extra credit, to retired professors seeking the latest details on black holes.

Freshman Laura Spiridon said that her environmental science class offered extra credit, but other students cited the same from physics classes, amongst others.

Many Penn State teachers also attended the event in hopes of broadening their own knowledge while ensuring students who attended received their extra credit.

During the talk, Williams tried to cover a wide base by starting with the principles discovered by Newton, then those expanded by Einstein while finishing with the theories of Hawking.

He finished the presentation with a picture of Hawking meeting the pope, an image he likened to a humble and frail Hawking in a wheelchair representing science and its developing theories while the pope stood for religious beliefs and spirituality.

Afterward, questions were asked by many in the audience regarding a wide variety of topics

related to space and its properties.

Following this question and answer session, the school concluded the evening out side under clear skies with their telescope.

Community members each took turns looking into the lens as it focused on the Moon, Mars, and even Saturn.

Additionally, several astronomers from the surrounding area brought their telescopes and let kids of all ages gaze into the vastness of space and look at the stars.

Penn State Erie has hosted several of these events through the year, the next of which is scheduled for April 14th.

It is titled "Dark Energy in the Universe" and will be presented by Roger Knacke in RI DC.

It too will be followed immediately by an open house of telescopes, weather permitting.